

Notice of Allowability	Application No.	Applicant(s)	
	09/891,682	COLGAN ET AL.	
	Examiner	Art Unit	
	Mike Qi	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendemnt of June 14, 2004.
2. ☒ The allowed claim(s) is/are 1-4,8-14 and 16-22.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☒ to Paper No./Mail Date 4.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-4,8-14,16-22 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The prior art of record neither discloses nor teaches a method for fabricating a collimate and post diffuse type liquid crystal cell comprising various steps and a collimate and post diffuse type liquid crystal cell comprising various elements as claimed, more specifically, as the following:

the different thickness for the color filter substrate and the TFT array substrate are 0.4 mm and 0.6 mm respectively [claim 1];

the step of providing the thinner of the first and second substrates on a viewer side of the collimate and post diffuse type liquid crystal cell to reduce depixelization and to provide depixelization ratio of less than about 1.6 [claim 9];

the thickness of the color filter substrate is less than the thickness of the TFT array substrate to provide a depixelization ratio of less than about 1.6 [claim 17];
The color filter substrate including a thickness which is less than a thickness of the thin film transistor array substrate to provide a depixelization ratio less than about 2.0 [claim 21];

the step of providing the thinner of the first and second substrates includes the step of providing a depixelization ratio of less than about 2.0; and further the depixelization ratio of less than about 1.6 [claim 22].

Claims 2-4 and 8 are dependent on the claim 1; claims 10-14 and 16 are dependent on claim 9; claims 18-20 are dependent on claim 17.

The closest references AAPA, Shin and Ohkuma disclose a collimate and post diffuse type liquid crystal cell wherein the upper and lower substrates having different thickness and using lapping and polishing to make the substrate thinning, but the prior art of records do not disclose the color filter substrate has 0.4 mm thickness and the TFT array substrate has 0.6 mm thickness as claimed in claim 1; and most references indicate thinning the thickness less than 0.5 mm would be very difficult, because more thin substrate would be very easy to be broken and get cracks. The prior art of records also do not disclose the thinner color filter substrate and the thicker TFT array substrate would provide a depixelization ratio of less than about 2.0 and 1.6 as claimed in claims 9,17,21 and 22.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Qi whose telephone number is (571) 272-2299. The examiner can normally be reached on M-T 8:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Qi
June 24, 2004



TARIFUR R. CHOWDHURY
PRIMARY EXAMINER